

Assignment: Blood Pressure Measurement (OSCE Guide)

Q1. List the essential equipment required for measuring blood pressure and explain why the correct cuff size is important.

Model Answer:

- **Essential equipment:** * Stethoscope
 - Sphygmomanometer (manual or aneroid) with appropriate cuff size
 - **Importance of cuff size:** * A cuff too small may overestimate blood pressure.
 - A cuff too large may underestimate blood pressure.
 - Correct cuff size ensures accurate and reliable measurement.
-

Q2. Describe the step-by-step procedure to estimate the approximate systolic blood pressure before performing accurate measurement.

Model Answer:

- Ensure the cuff valve is closed.
 - Palpate the patient's radial pulse at the wrist.
 - Inflate the cuff until the radial pulse is no longer palpable.
 - Note the reading at which the pulse disappears → this is the approximate systolic BP.
 - Deflate the cuff completely before proceeding to accurate measurement.
-

Q3. What are Korotkoff sounds? Which sounds represent systolic and diastolic blood pressure, and how are they identified during measurement?

Model Answer:

- **Korotkoff sounds** are pulsatile sounds heard over an artery using a stethoscope during gradual deflation of a BP cuff.
 - **First Korotkoff sound** → represents Systolic BP (point at which pulsatile sounds first appear).
 - **Fifth Korotkoff sound** → represents Diastolic BP (point at which pulsatile sounds disappear).
-

Q4. Define the following abnormalities in blood pressure and mention one clinical condition associated with each:

Model Answer:

- **Hypertension:** $\text{BP} \geq 140/90$ mmHg (<80 years) or $\text{BP} \geq 150/90$ mmHg (≥ 80 years).
 - **Example:** Essential hypertension.
 - **Hypotension:** $\text{BP} < 90/60$ mmHg.
 - **Example:** Shock.
 - **Narrow pulse pressure:** Difference between systolic & diastolic <25 mmHg.
 - **Example:** Aortic stenosis, cardiac tamponade.
 - **Wide pulse pressure:** Difference >100 mmHg.
 - **Example:** Aortic regurgitation, aortic dissection.
-

Q5. Outline the steps to be followed after completing a blood pressure measurement, including communication with the patient and documentation.

Model Answer:

- Remove the cuff and thank the patient.
- Explain the results clearly to the patient in simple terms.
- If abnormal, discuss further steps (e.g., repeat measurement, investigations, treatment).
- Dispose of PPE appropriately and wash hands.
- Document the lowest BP reading in the patient's notes.